

THE ROLE OF BLADDER DYSFUNCTION IN MEN WITH LOWER URINARY TRACT SYMPTOMS REFRACTORY TO ALPHA-BLOCKER THERAPY – A VIDEO-URODYNAMIC ANALYSIS

Hypothesis / aims of study

Lower urinary tract symptoms (LUTS) in men result from a complex interplay of pathophysiology, including bladder and bladder outlet dysfunction. This study retrospectively analyzed bladder dysfunction in men with LUTS based on the results of video-urodynamic studies (VUDS).

Study design, materials and methods

Male patients, 40 years of age or more, with LUTS and an International Prostate Symptom Score of ≥ 8 were retrospectively recruited and evaluated with VUDS and total prostate volume (TPV). Patients were further divided into subgroups of bladder dysfunction and bladder outlet dysfunction according to characteristic VUDS findings. Age, TPV, and VUDS findings were compared among different subgroups.

Results

After VUDS, bladder outlet obstruction (BOO) was only noted in 48.6% of men. 919/2991 (30.7%) patients had bladder dysfunction including detrusor underactivity (DU, 5.1%), detrusor overactivity and inadequate contractility (DHIC, 5.3%), detrusor overactivity (DO, 17%), and hypersensitive bladder (HSB, 3.3%). In addition, 1941 (64.9%) had bladder outlet dysfunction including BOO+DO (33.8%), BOO alone (14.8%), and poor urethral sphincter relaxation (PRES, 16.3%). Among the 1519 patients with DO, 66.6% (1012) had BOO while, among 1454 patients with BOO, 69.5% (1010) had DO. Patients with DHIC, DU, and DO were 5 years older than patients with HSB and normal men. TPV was significantly smaller in patients with DHIC, DU and DO as compared with BOO+DO.

Interpretation of results

This study included a large cohort of men with LUTS. The results of this study revealed that among men with LUTS, 64.9% had bladder outlet dysfunction while 30.7% of men with LUTS had bladder dysfunction including DO, DU, DHIC, and HSB. LUTS in men is caused by either bladder or bladder outlet dysfunction occurring alone or in combination. About one-third of male LUTS was due to bladder dysfunction. BOO was only noted in 48.6% of men with LUTS. A man older than 70 years with LUTS and TPV less than 30ml usually indicates the presence of bladder dysfunction rather than BOO. Men younger than 65 years with LUTS and a TPV < 30ml might be due to HSB or PRES. These results provide evidence for treatment decision making in men with LUTS. Medical treatment should be tried first and surgical intervention should be deferred until BOO is proven for men with LUTS.

Concluding message

About one-third of male LUTS was due to bladder dysfunction. A man older than 70 years with LUTS and TPV less than 30ml usually indicates the presence of bladder dysfunction rather than BOO.

Table 1. Video-urodynamic classification of pathophysiology of male LUTS

Normal bladder and outlet function	131 (4.4%)
Bladder dysfunction	919 (30.7%)
Detrusor underactivity	153 (5.1%)
Detrusor hyperactivity and inadequate contractility	159 (5.3%)
Detrusor overactivity (without bladder outlet obstruction)	508 (17.0%)
Hypersensitive bladder	99 (3.3%)
Bladder outlet dysfunction	1941 (64.9%)
Bladder outlet obstruction with detrusor overactivity	1011 (33.8%)
Bladder outlet obstruction without detrusor overactivity	443 (14.8%)
Poor relaxation of the urethral sphincter	487 (16.3%)
Total	2991 (100%)

Fig. 1. The age distribution of men with lower urinary tract symptoms by the diagnostic subgroups.

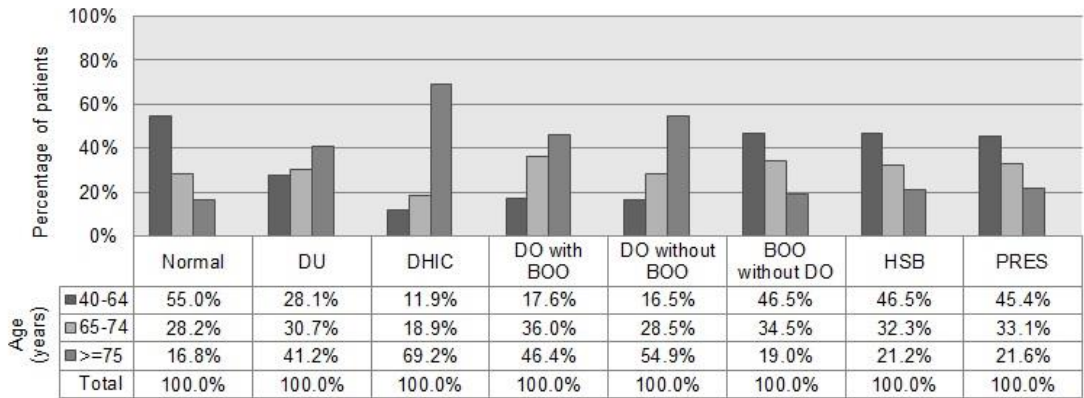
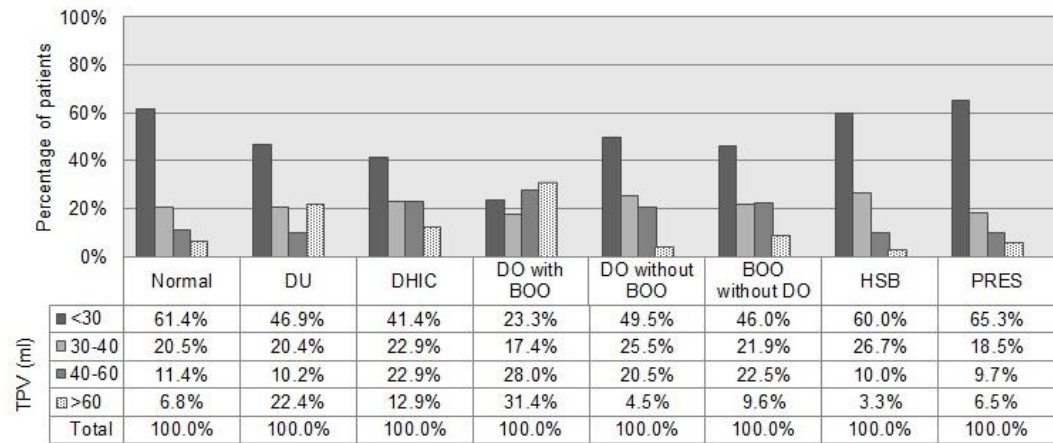


Fig.2. The total prostate volume in men with LUTS by the diagnostic subgroups.



Disclosures

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